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TITLE: Determn. of tannin-seeking proteins - involves densitometry after electrophoresis of tannin protein mixts.

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PRIORITY-DATA: 1988SU-4622297 (December 19, 1988), 1988SU-4462229 (December 19, 1988).

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
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| SU 1661182 A | July 7, 1991 | | 003 | |

INT-CL (IPC): C07K 3/02

ABSTRACTED-PUB-NO: SU 1661182A

BASIC-ABSTRACT:

Proteins that associate with tannin are identified by addn. of different amts. of tannin to a multicomponent protein system followed by electrophoresis in polyacrylamide gel (PAAG) and development of the proteins by trichloroacetic acid soln. Density measurements of the gel then enable the ratio of tanninphilic to tannin-phobic tannin-philic to tannin-phobic proteins to be determined.

500 mg of a finely ground mixt. of wheat and barley grains is shaken with 5 ml 70% ethanol soln. for 1 hr. to extract the proteins. After centrifuging at 7.000 g for 15 mins. the supernatant liquid is removed and reduced to 1/3 - 1/4 of its volume. Then dry urea and sucrose are added to give concns. of 6M and 20% respectively and the total protein concn. determined using the dye amido black 10 B. The soln. is then divided into 7 x 200-250 microl-l aliquots and tannin added in the following amts. (mg per 500 micro-g protein: 0 (control), 2, 5, 10, 15, 25. After 30 min, the mixts. are subjected to electrophoresis in 7.5% PAAG with 6M urea in glass tubes, the first 30 min at 2 mA and the following 1.5 h at 4 mA. The gel is then immersed in a 10% trichloroacetic acid soln. and its density scanned. The relative amts. of proteins are determined from areas under the corresponding peaks.

USE/ADVANTAGE - The method is used in molecular biology and bioorganic chemistry in studying the structure and functions of proteins and in investigations of model systems of polyphenols and proteins. It is a simple and cheap form of analysis.
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